AGREEMENT FOR SERVICE

THIS AGREEMENT, is effective on the 15th day of October 2007, for "Monopole Consulting Services" by and between the County of Loudoun, Virginia, hereinafter called the "County", and Atlantic Technology Consultants, Inc., hereinafter referred to as "Contractor".

WITNESSETH:

In consideration of the mutual covenants set forth herein, the parties agree as follows:

1.0 SCOPE OF SERVICES

The Contractor shall act as an independent consultant and provide the County with expert services and consultation, to the best of its ability, on all subjects related to wireless telecommunications of County selected land development applications. Specifically, the Contractor shall perform the following tasks pursuant to providing a technical review of the following applications, or as substituted by the County, for a maximum of nine (9) wireless telecommunication facilities:

- 1. CWS site 108 Arlington Corner (SPEX 2007-0014/CMPT 2007-0007)
- 2. CWS site 114 Round Hill (SPEX 2007-0016/CMPT 2007-0009)
- 3. Verizon Wireless at Round Hill (SPEX 2007-0019/CMPT 2007-0012/ZMOD 2007-0010)
- 4. Charles Town Pike (SPEX 2007-0023/CMPT2007-0014)
- 5. CWS site 106 Wheatland (SPEX 2007-0013/CMPT 2007-0006)
- 6. Nextel Silo at Rockland Farm (SPEX 2005-0037/CMPT 2005-0007)
- 7. Nextel Silo Philomont Watermill Road (SPEX 2002-0032/CMPT 2002-0017)
- 8. CWS site 101 Whites Ferry (SPEX 2007-0001/CMPT 2007-0001)
- 9. CWS site 102 Taylorstown (SPEX 2007-0012/CMPT 2007-0005

1.1 Tasks

- 1.1.1 Review application package received October 16, 2007 from the County to verify completeness and check for errors, omissions and discrepancies. The Contractor shall contact the applicant upon direction from the County and attempt to resolve minor errors, omissions and discrepancies as they may exist. Major errors, omissions and discrepancies, which preclude completion of the review, as they may exist, shall be reported to the County prior to proceeding with the remaining tasks below.
- 1.1.2 Perform site visit to collect field data, document existing site conditions, and assess potential impacts.
- 1.1.3 Survey the area surrounding the proposed facility to identify potential colocation alternatives and provide a comparative analysis of other potentially competing telecommunication facilities accepted for County application review.

- 1.1.4 viability of alternative locations and designs. Generate radio frequency propagation coverage maps using propagation mapping software to investigate coverage requirements and assess the
- 1.1.5 submitted propagation models will be considered. the use of propagation map software. Analyze minimum height requirements for the proposed structure through Coverage objectives and applicant
- 1.1.6 appropriate) shall be provided to the County within a fifteen (15) business one (1) CD of the final report (with supporting information in color, as Telecommunication Facilities, and the applicable Loudoun County Zoning Ordinance shall be the basis for all recommendations. One (1) copy and days after receipt of the complete application. camouflage/concealment techniques among other considerations. The justification of the use need, alternative sites/structures, and propagation coverage studies, drawings and data. Report shall address supporting information including but not limited to photographs, maps, Report findings in a written report to include recommendations and Revised General Plan, the 1996 Strategic land Use Plan for
- The Contractor shall be available to represent all findings and hearings, works sessions, community information meetings). recommendations at not more than two (2) meetings (e.g. public

1.2 County Responsibilities

- 1.2.1 The County shall designate the Director of the Planning Department or designee as the primary point of contact. Said point of contact shall have described herein. responsibility and authority to execute the County responsibilities
- 1.2.2 scope of services that are the subject of the agreement. The County shall use its best efforts to provide the Contractor with the cooperation of all County staff and officials in matters relating to the
- 1.2.3 including, but not limited to maps, drawings, data and other documents The point of contact shall make all existing information available at no and information. additional cost to the consultant relevant to the Scope of Services

2.0 COST OF SERVICES

The Contractor shall perform the services described herein for a fixed fee of \$3,200 per application. This fee shall include all costs incurred in association with meals and administrative expenses. the performance of the services described herein and shall include travel, lodging

be approved in writing by the Purchasing Agent and the Contractor. However, not at any time shall the total amount of this contract exceed \$30,000. The request of services in addition to the Scope of Services described herein must

3.0 CONTRACT TERMS AND CONDITIONS

3.1 Method of Payment

detailing the appropriate charges. Upon submission of final reports, the Contractor shall submit an invoice,

Upon receipt and verification of invoice, the County will render payment within thirty (30) days. Invoices shall be submitted to:

County of Loudoun, Virginia
Department of Planning
Attn: Sarah Lindsey
P.O. Box 7000
Leesburg, Virginia 20177-7000

3.2 Payments to Subcontractors

either: Within seven days after receipt of amounts paid by the County for work performed by a subcontractor under this contract, the Contractor shall

- ü payment received from the County attributable performed by the Subcontractor under this contract; or Pay the Subcontractor for the proportionate share of the total County attributable to t Te work
- Ò for non- payment. withhold all or a part of the Subcontractor's payment and the reason Notify the County and Subcontractor, in writing, of his intention to

withheld as allowed in item b. above. The Contractor shall pay interest to the Subcontractor on all amounts owed that remain unpaid beyond the seven day period except for amounts

accrue at the rate of one percent per month. Unless otherwise provided under the terms of this contract, interest shall

3.3 Employment Discrimination by Contractors Prohibited

- During the performance of this contract, the Contractor agrees as
- (a) applicant for employment because of race, religion, color, sex, national origin, age, disability, status as a service disabled The Contractor will not discriminate against any employee veteran, or any other basis prohibited by state law relating to

discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

- ਭ such Contractor is an equal opportunity employer. employees placed by or on behalf of the Contractor, will state that The Contractor, ₹ <u>ല</u> solicitations 윽 advertisements 호
- the purpose of meeting the requirements of this section. with federal law, rule or regulation shall be deemed sufficient for Notices, advertisements and solicitations placed in accordance
- Ы subcontractor or vendor. paragraphs a, b, and c in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each Contractor will include the provisions of the foregoing

3.4 Drug-free Workplace

subcontractor or vendor. order of over \$10,000, so that the provisions will be binding upon each provisions of the foregoing clauses in every subcontract or purchase the Contractor maintains a drug-free workplace; and (iv) include the employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or behalf of the Contractor that controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against manufacture, sale, distribution, dispensation, possession, or use of a employment, a statement notifying employees that the unlawful conspicuous places, available to employees and applicants for provide a drug-free workplace for the Contractor's employees; (ii) post in During the performance of this contract, the Contractor agrees to (i)

marijuana during the performance of the contract. of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or awarded to a Contractor in accordance with this chapter, the employees the performance of work done in connection with a specific contract For the purpose of this section, "drug-free workplace" means a site for

3.5 <u>Faith Based Organizations</u>

Loudoun County does not discriminate against faith-based organizations

3.6 Governing Law

Commonwealth of Virginia. contract shall be governed 크. all respects by the aws of Fije

Management and Financial Services
Division of Procurement, MSC #41C
1 Harrison Street, S.E., 4th Floor
Leesburg, Virginia 20175
Phone: (703) 777-0403
Fax: (703) 771-5097 Name_ B_Y COUNTY OF LOUDOUN, VIRGINIA Dendra Sandra A. Lineberry Long Name_ Phone: Fax Atlantic Technology Consultants, Inc. 10197 Maple Leaf Court Ashland, Virginia 23005 George N. Condyles, IV (804) 550-7490 (804) 550-7493

Date



THE ATLANTIC GROUP

July 23, 2002

TECHNOLOGY CONSULTING

TOWER SERVICES

MARINE RADIO SERVICES

PROPERTY MANAGEMENT

Post Office Box 7000 Leesburg, Virginia 20177-7000 Department of Planning County of Loudoun Lou Mosurak Planner

Ŗ CWS-Point of Rocks SPEX 2001-0015 (ATC # 1025-05)

Dear Mr. Mosurak:

Enclosed are our comments regarding the telecommunications application referenced above. Our comments are based on a site visit and comprehensive review of the documentation you supplied.

If you have any questions regarding this analysis, please do not hesitate to

With kindest regards,

James M. Whitaker, P.E. Vice President – Engineering

Joseph E. Vidunas

Director of Planning

DEPARTMENT OF PLANNING

ន George N. Condyles, IV - President and COO

ATTACHMENT 2

TECHNICAL REVIEW

PROPOSED MONOPOLE CWS-POINT OF ROCKS LOUDOUN COUNTY SPEX 2001-0015 (ATC # 1025-05)

Submitted By:

ATLANTIC TECHNOLOGY CONSULTANTS, INC.

A Member of The Atlantic Group of Companies

July 23, 2002

BACKGROUND:

proposed structure is designed to provide service in the Route 15 corridor and the surrounding area communications purposes at 12663 Myersville Lane near Point of Rocks.¹ The site is located on the east flank of Furnace Mountain on a heavily wooded parcel owned by Jerry M. and Antoinette Crowder. The Community Wireless Structures, Inc. (CWS) proposes to construct a 165-foot monopole for wireless

CWS is a tower developer and does not own spectrum or provide wireless communication services. Should the proposed structure be approved, Sprint PCS (Sprint) and AT&T Wireless (AT&T), both licensed service providers, have committed to locate on this multi-tenant structure.

SITING AND DESIGN:

The 21.7-acre Crowder parcel is zoned A-3 (Agricultural-Residential) and is undeveloped. Several residential dwellings are located on adjacent parcels. The proposed facilities are situated approximately midway down-slope of an 891-foot ridge (Furnace Mountain) within a small clearing of the wooded lot. The tallest trees in the vicinity of the proposed site range between 70-90 feet in height. The majority of the parcels surrounding the site are undeveloped though at least five (5) habitable structures situated on parcels fronting Route 15 are within 700 feet of the proposed structure.

Photo simulations supplied by the applicant and a site visit indicate that the top portion of the structure will be visible from certain vantage points along Route 15, a state designated scenic byway. The lower portion of the structure, including the 100-ft. \times 100-ft. fenced compound will be well screened by existing trees and shrubs.

plan consisting of 13 native trees and plant species in a buffer surrounding the 10,000-square-foot compound to abate visibility of the compound. The applicant proposes an 8-foot chain link fence fronted by a wood stockade fence around the perimeter of the compound. In addition, the applicant proposes to develop, implement and maintain a landscaping

structure to 172 feet above ground level The addition of a seven-foot lightning rod on top of the structure will extend the total height of the

an extension thereby increasing its height. All communications equipment including antennas, antenna The plan drawings indicates the proposed 165-foot monopole structure is designed to support six (6) wireless service providers at heights of 160, 150, 140, 130, 120, and 110 feet. Sheet 4 of the plan drawings include the note "Top Flange Future" implying that the structure is designed to accommodate support structure, cables and base station equipment will be located within the fenced compound

ENVIRONMENTAL & HISTORIC IMPACTS:

Environmental Review

from its construction of antenna support structures and disclose those effects in an *Environmental***Assessment** that must be filed with the FCC for review. environmental considerations into their decision-making process. As a licensing agency, the Federal The National Environmental Policy Act of 1969 (NEPA), delineated in Title 47 of the Code of Federal Regulations, Part 1, Subpart I, sections 1.1301-1.1319, requires federal agencies to incorporate Communication Commission (FCC) requires all licensees to consider the potential environmental effects

Potential impacts on the following categories are to be considered under this requirement:

- Wilderness Area(s)
- Wildlife Preserve(s)
- Endangered Species
- American History
- in the National Register of Historic Places Architecture, Archeology, Engineering, or Culture that are listed, or potentially eligible for listing
- Indian Religious site(s)
- Flood Plain(s)
- Surface Features (e.g. Wetlands, Deforestation, or Water Diversion)
- Residential Neighborhood
- High Intensity White Lights
- Cumulative Power Output

Historic Review

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires that the State Historic Preservation Office² (SHPO) and the President's Advisory Council on Historic Preservation be given a review and respond impacts on historic resources, as determined by the applicant. Upon receipt, the SHPO has (30) days to the project, a listing of historic resources and a discussion of any measures being undertaken to mitigate reasonable opportunity to comment on all federal undertakings with the potential to affect historic properties. Prior to construction, the licensee is required to submit to the SHPO a detail description of

rindings

within the Catoctin Rural Historic District. Virginia SHPO determined that construction of the proposed contained in GTA's environmental assessment report dated July 2002. The proposed facilities are sited Geo-Technology Associates, Inc. (GTA), on behalf of the applicant, performed a review of the potential impact the proposal would have on environmental and historic resources. The findings of the study are facilities would diminish many of the characteristics that make the historic district eligible for listing in the National Register thus resulting in an a*dverse effect* on the historic district.

Maryland SHPO. The Virginia Department of Historic Resources is the Virginia SHPO. The Maryland Historic Trust is the

on the historic district that would result from the construction of the proposed facilities stipulations contained in the MOA represent a significant deviation from the applicant's original proposal that was found by DHR to constitute an adverse effect3. According to Marc Holma of DHR, Department of Historic Resources (DHR) and CWS stipulating specific measures that are to be implemented to mitigate the effects of the proposed undertaking on historic properties. None of the implementation of the measures stipulated in the MOA will alleviate but not eliminate the adverse effect A Memorandum of Agreement (MOA) was executed July 9, 2002 between the FCC, the Virginia

impact on the Heaters Island Wildlife Management Area, a portion of which lies within the study area. The Maryland agency that is responsible for the purview of Wildlife Management Areas was apparently determination of "no effect to historic properties". The study did not identify or assess the potential Maryland. The Maryland Historic Trust was advised of the proposed construction and made a The study area, represented by a one-mile radius circle centered on the proposed structure, extends into

AVIATION CONSIDERATIONS:

studies are useful for planning purposes, the final authority with respect to height restrictions, lighting Associates, aviation consultants, examined this proposal and determined that FAA notice is not required nor is obstruction marking or lights required per Federal Aviation Rules (FAR) Part 77. Though consultant and/or other markings resides with the FAA. potential effect the proposed structure may have on safe air navigation. The FAA may limit the height and/or require lighting or other markings in order to mitigate any potential hazard. Walter Wulff & structures, unless categorically excluded under FAA rules and regulations. The Federal Aviation Administration (FAA) requires that an air hazard study be performed for all new This study examines the

ALTERNATIVE STRUCTURES:

table and Exhibit 1). co-locatable structures were identified within a three-mile radius of the proposed site (see the following The use of an existing structure is preferred over the development of a new structure. Two (2) potential

Table 1. Potential co-location alternatives

American Tower	Power Tower	Sirevidines
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199	60	((i))) EXENT THE FOREIGN
484	920	(AD) (CA) (AD) (CA) (AD) (CA)
1.7	2.5	(film Engl) Light Sites (miss)

recently granted approval to construct a 199-foot monopole tower in Frederick County, approximately 1.7 series of high-power transmission towers traverse a small ridge (Catoctin Mountain) northeast of the proposed site in Frederick County, Maryland. American Tower Corporation (American Tower) was highest available co-location position is a minimum 186 feet. Verizon Wireless (Verizon) is the only service provider committed to locate on this structure, thus the miles east of the proposed site. The American Tower structure is scheduled for construction in early fall. Power transmission towers are particularly well-adapted to support and disguise antenna installations.

stipulates that the monopole shall be of a neutral color, selected in consultation with the Virginia SHPO. It should be noted that CWS's original proposal did not specify the color of the monopole. The MOA

PROPAGATION ANALYSIS:

and to provide co-location opportunities for other service providers. are also located on this structure. CWS contends that a minimum 165-foot structure is needed in order to allow Sprint and AT&T to provide contiguous coverage with its existing and planned network of sites of the proposed site located at the Lucketts Volunteer Fire Department (VFD). Sprint is located at the 182-foot level and AT&T is located at the 128-foot level in addition to Cingular, Nextel and Verizon which The coverage objective for this site is to provide service in the Route 15 corridor and the surrounding The proposed site is designed as a "hand-off" site for the existing communications monopole south

evaluated because of the height of the surrounding tree canopy.) Sprint will occupy the top position on the proposed structure; AT&T will occupy the next highest slot (approximately ten (10) feet below Sprint). For example, for a 140-foot structure, Sprint was analyzed at 140 feet above ground level (AGL); heights of 160, 140, 120 and 100 feet at the proposed tower location. (Lower structure heights were not of - 89 dBm) represent acceptable coverage with the areas shaded in green representing the strongest coverage for Sprint and AT&T respectively. Areas shaded in yellow and green (minimum signal strength AT&T was analyzed at 130 feet AGL. location. Exhibits 4-11 show the composite coverage for the existing and potential coverage, at structure maps reveal gaps in coverage for both service providers in the immediate vicinity of the proposed tower Several scenarios were analyzed to evaluate the affect on coverage using a shorter structure at the proposed location and the alternative structures previously identified. Exhibits 2-3 show existing communication back to the tower. Areas shaded gray represent "spotty" or unreliable coverage.

Mountain. (AT&T coverage was not analyzed from the American Tower Corporation structure or the power transmission tower since AT&T is not licensed in the market area where these structures are Exhibit 12 demonstrates Sprint coverage achievable from the approved American Tower structure. Exhibit 13 demonstrates Sprint coverage achievable from a power transmission tower on Catoctin

90 feet respectfully. Neither the pending American Tower structure nor the power transmission tower Lucketts and Point of Rocks is achievable for Sprint and AT&T at antenna mounting positions of 100 and Rocks for Sprint and AT&T. Propagation analysis demonstrates that contiguous coverage between the Propagation analysis reveals diminished or unreliable coverage in the Route 15 corridor near Point of will adequately address Sprint's service requirements in the corridor.

RECOMMENDATIONS:

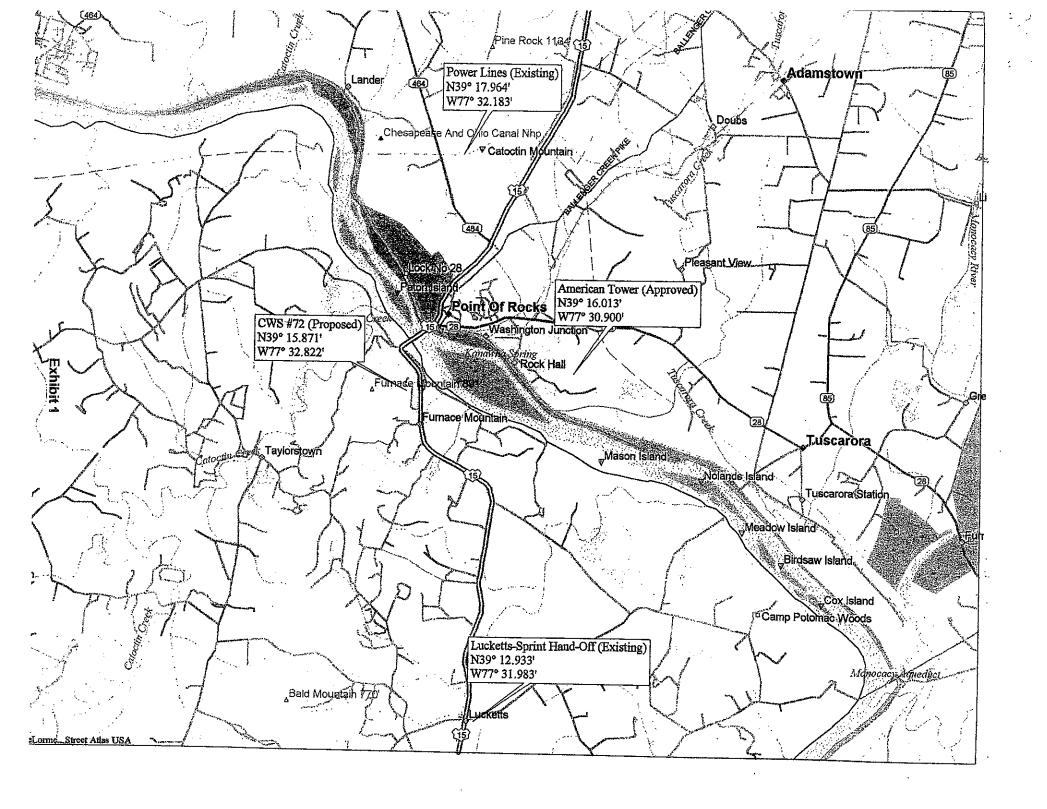
construction of a second structure. limit the number of service providers that could be accommodated on the structure and may require the service requirements for Sprint and AT&T can be met by a shorter structure. A reduction in height would or seek to provide service in the corridor near Point of Rocks. Propagation analysis reveals that the in the corridor, it is reasonable to conclude that at least three (3) additional service providers may require future demand for antenna mounting positions on this structure. Based upon existing coverage in the corridor and Route 15's status as a high-volume, primary, U.S. highway and lack of alternative structures Sprint and AT&T have executed leases to locate on the proposed structure. It is difficult to ascertain

requirements of other providers, we recommend that the proposal be approved with the following Given the legitimate service requirements of Sprint and AT&T and the probable future service

The structure should be limited to a maximum height of 165 feet with an allowance for the installation of a seven (7)-foot lightning rod resulting in an overall height of 172 feet.

- Ņ should be submitted attesting to fulfillment of this requirement. providers. A statement from a structural engineer licensed in the Commonwealth of Virginia The structure should be of the minimum diameter necessary to accommodate six (6) service
- ω To minimize the profile and thus visibility of the structure, panel antennas should be flush-mounted. Cables should be concealed within the cylinder of the monopole.
- 4 the natural wooded environment comprising the backdrop for the structure as seen from Route The monopole structure and all appurtenances attached thereto should be painted to blend with
- ក An official Air Hazard Determination (FAR 77) should be performed. Consultant studies are useful for performing preliminary evaluations, however the final authority with respect to height restrictions and the requirements for lights and/or other markings resides with the FAA.
- ġ occupancy permit for each service provider to locate on the structure. FCC rules (OET-65) require that a non-ionizing electromagnetic radiation (NIER) analysis be compliance should be presented and appropriate signage posted prior to issuance of an safe environment for workers and the general public who may be exposed. Evidence of performed on the cumulative effect of all antennas to be located on the structure to ensure a
- Within three (3) months of installation of the proposed facilities, Sprint and AT&T should install and operate their equipment and begin to provide service.
- φ Procedures Implementing the NEPA of 1969 should be contacted and given the opportunity to respond. Appropriate actions should be taken based upon the response. All Maryland agencies that were not contacted pursuant to Title 47 C.F.R. Chapter I Subpart I-

structure could be extended incrementally on a carrier-by-carrier basis to a maximum height of 165 feet. to accommodate Sprint and AT&T. As an option to permitting construction of the structure to an initial height 165 feet, the structure could built under the reverse stacking concept whereby the structure is initially constructed to a lower height As other service providers seek to locate on the structure,



Highways

Water Features

Exhibit 2

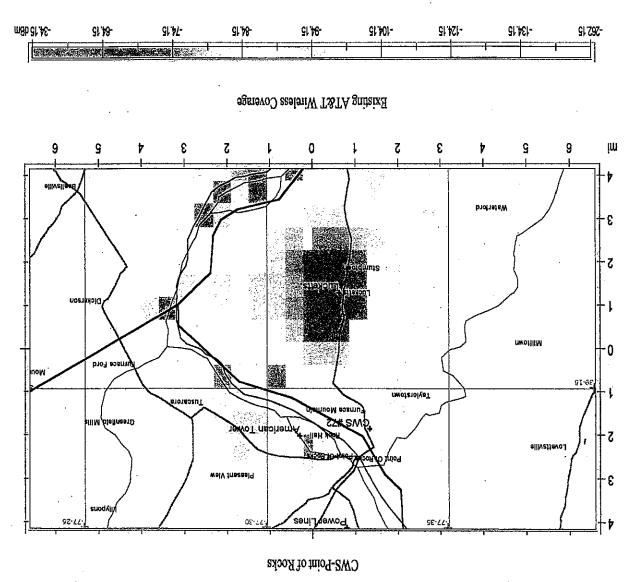
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County Borders

Exhibit 3

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Water Features



City Borders

Map Scale: 1:141091 I'' = 2.23 mi V/H Size: 8.30 x 13.19 mi

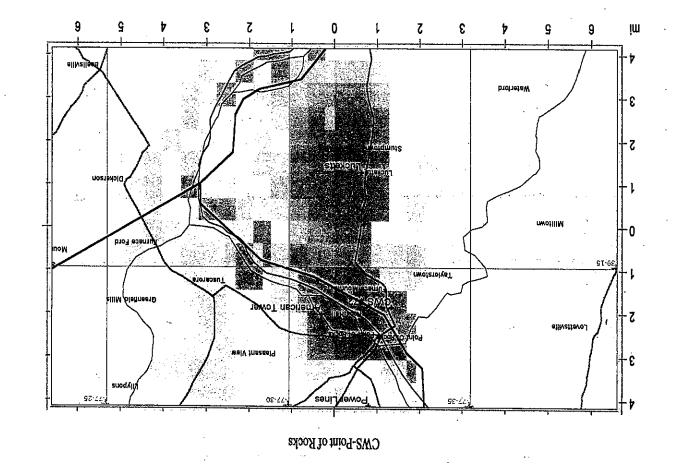
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■ County Borders

County Borders

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Water Features



Loudoun County

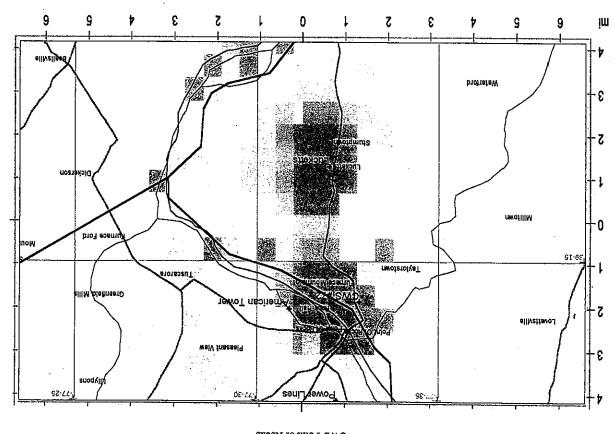
Composite Sprint Coverage- Existing & Proposed CWS Structure @ 160 ft.

City Borders

Highways

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Water Features



Composite AT&T Wireless Coverage- Existing & Proposed CWS Structure @ 150 ft.

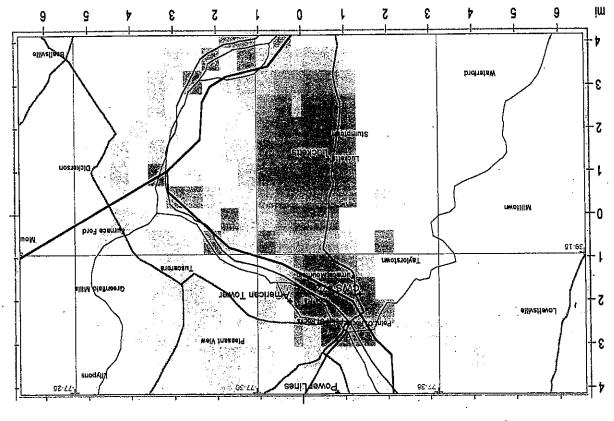
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Map Scale: 1:141091 I'' = 2.23 mi V|H Size: 8.30 x 13.19 mi

County Borders



Composite Sprint Coverage- Existing & Proposed CWS Structure @ 140 ft



County Borders State Borders City Borders Water Features binD no. Lat/Lon Grid

Exhibit 6

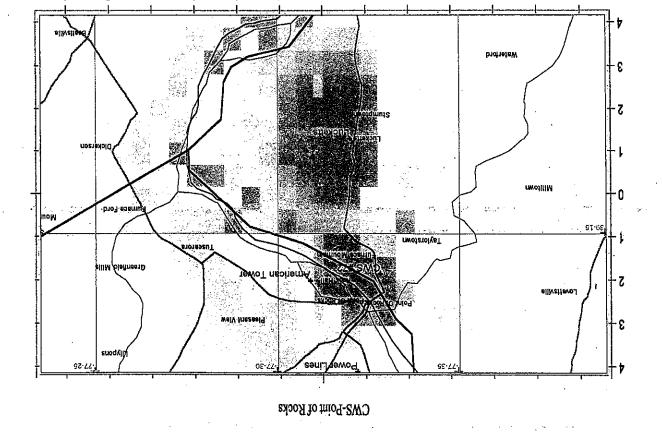
Exhibit 7

Greenfield, Milis TOWOT INSCHART Lovettsville CWS-Point of Rocks

Composite AT&T Wireless Coverage- Existing & Proposed CWS Structure @ 130 ft.

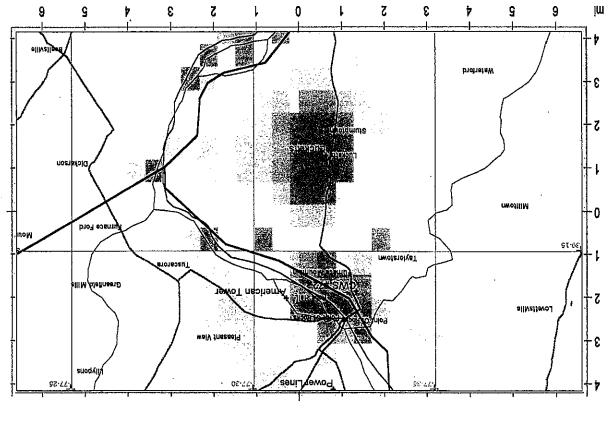


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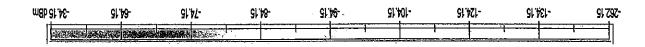


Composite Sprint Coverage-Existing & Proposed CWS Structure @ 120 ft.

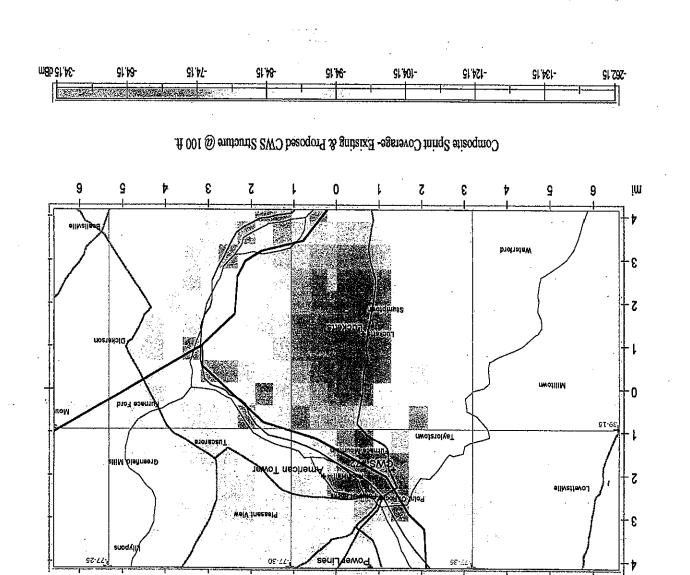




Composite AT&T Wireless Coverage- Existing & Proposed CWS Structure @ 110 ft.



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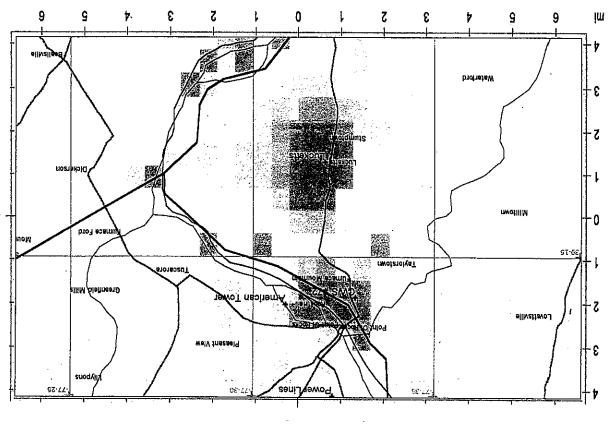


CWS-Point of Rocks

Monday, July 22, 201

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Composite AT&T Wireless Coverage- Existing & Proposed CWS Structure @ 90 ft.



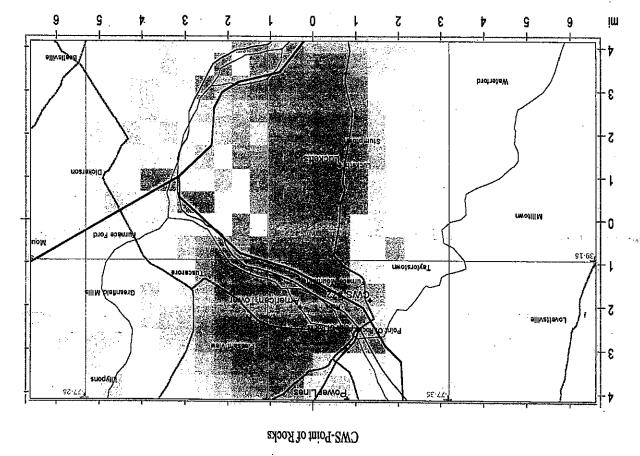
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Water Features

Exhibit 12



Composite Sprint Coverage- Existing & Approved American Tower Structure @ 186 ft.

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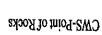
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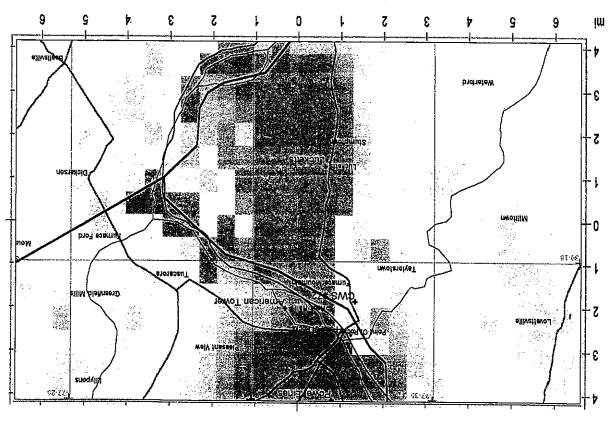
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Water Features

Exhibit 13





Composite Sprint Coverage- Existing & Power Lines @ 60 ft.

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City Borders

elecommunication and Use Plan Strategic Pacilities for

Adopted as part of Loudoun County's Comprehensive Plan Novemer 6, 1996

ATTACHMENT 3

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Adopted by: The Loudoun County Board of Supervisors

Dale Polen Myers, Chairman

Lawrence S. Beerman
Jim Burton
Helen A. Marcum

Joan G. Rokus
Elanore C. Towe
Steve Whitener
Scott K. York

David G. McWaters

Prepared Initially by: The Loudoun County Planning Commission

C. Terry Titus, Chairman

Robert F. Dupree Karl Hellmann George Kirschenbauer

David Olson

Alfred P. Van Huyck Bernard J. Way Teresa White John Whitmore

With Staff Assistance From:

James P. "Irish" Grandfield, Project Manager
Jim Wasilak, Planner
Joel Gallihue, Planner
Larr Kelly, Assistant County Attorney
John Lassiter, Zoning Planner
Robert Burke, Fire Marshall's Office

Loudoun County Department of Planning, 1 Harrison St. S.E. P.O. Box 7000 Leesburg, VA 20175
(703)777-0246

SECTION I: BACKGROUND

A. INTRODUCTION

through the County). Changes in commercial public telecommunication demand and technology towers or monopoles. The increased demand for these facilities poses a number of important land have caused a great demand for additional antenna mounting facilities, mostly in the form of lattice Loudoun County (see "Existing and Proposed Telecommunication Antennas" map available There are currently more than forty commercial public telecommunication antenna sites in siting and design, and mitigating impacts of telecommunication facilities. use issues for Loudoun County including facilitating collocation of antennas, ensuring appropriate

the overall land use strategy for allowing commercial public telecommunication service in Loudoun telecommunication facilities only, not amateur operations. The intent of these policies is to provide towers and monopoles. Guidance is provided for the location and design of commercial public for commercial public telecommunication service with the County's desire to avoid proliferation of The policies outlined in this document were developed by the County to balance the public demand County, while mitigating any negative impacts.

B. GOAL AND OBJECTIVES

Goal:

of its citizens for high quality service. essential part of creating an attractive economic development environment and meeting the desires beauty, and rural heritage. telecommunications services while mitigating the impacts on its residents, nearby land uses, scenic Loudoun County recognizes that modern, effective, and efficient telecommunications is an The County seeks to encourage improvements in

Objectives:

- facilities can be located, while minimizing the proliferation of towers and monopoles; To identify a hierarchy of areas where future commercial public telecommunication
- 12 structures and towers; To require collocation of commercial public telecommunication facilities on existing
- μ To attempt to ensure compatibility of telecommunication facilities with nearby land uses;
- 4 To establish siting and design criteria to mitigate negative impacts:
- Ų, To establish commercial public telecommunication tower and monopole removal policies;

- 9 To establish a process by which an applicant can demonstrate their compliance with these
- 7. monopoles. To stay abreast of changing technologies that may reduce the need for new towers and

C. COMMUNITY PLANNING PROCESS

The proposed policies were developed initially by the Transportation, Subdivision, and Site Plan Committee of the Planning Commission over a three month period in the spring of 1996 that included two public input sessions. As part of their review, the Committee heard presentations the policy and regulations of several other jurisdictions. from citizens, telecommunication providers, the FCC, Leesburg Airport, and the County's Fire and The Committee then reviewed existing County policy and regulations and looked at

On May 22, 1996, the Committee presented the recommended draft policies to the Planning subsequently added two new policies and revised others. The Board of Supervisors held a public hearing on these policies on September 4, 1996 and subsequently added two new policies and revised others. On November 6, 1996, the Board on June 12, 1996 and made further amendments to the draft policies at their June 19 work session. review. The Planning Commission held a public hearing on the draft telecommunication policies Commission Committee of the Whole. The draft policies were then sent to referral agencies for approved this comprehensive plan amendment establishing this document as part of the County's comprehensive plan.

RELATIONSHIP TO OTHER COUNTY DOCUMENTS

plans, strategic plans, and related documents. The General Plan provides the overall countywide telecommunications policies are a strategic plan consisting of goals and policies for the siting and design of telecommunication facilities. As such, these telecommunication policies supersede strategic plans outline more specific strategies for local planning areas or particular issues. These goals and policies for managing growth and development while the area management plans and Loudoun County's Comprehensive Plan consists of the General Plan; several area management Energy and Communication Policies 4,5, and 6 on page 83 and Energy and Communication policy 2 on page 156 in the General Plan and apply in all areas of the County.

TELECOMMUNICATION POLICIES

P LOCATION POLICIES

monopoles. When a telecommunication antenna cannot locate on an existing structure for technical existing tall structures, monopoles and towers in order to minimize the need for new towers and telecommunication facilities. The County's first preference is to have new antennas collocate on The location policies establish a hierarchy of preferred locations for new commercial public are most compatible with surrounding land uses. or location reasons, the County then prefers that new towers or monopoles be located where they

areas. In urban eastern Loudoun County, the policies encourage telecommunications antennas additionally on light poles within the VDOT or Dulles Greenway right-of-way, and potentially on incentives, such as allowing monopoles as a by-right use, for applicants to locate in these preferred "Telecommunications By-Right Zoning" maps available through the County). The policies provide volunteer fire and rescue The second level of preferred locations for new monopoles or towers is in industrial and towers on existing low-rise heavy industrial buildings. employment areas, within overhead transmission line rights-of-way, and on public sites or company properties (see the "Public Facility Sites"

telecommunications towers and monopoles in rural areas will be allowed only by special exception. Furthermore, the County will not allow new towers or monopoles to locate in County designated order to protect the scenic rural beauty of Loudoun County, commercial public

Countywide Location Policies

- monopoles, water tanks, overhead utility transmission line commercial public telecommunication antennas be located on existing buildings, towers, structures wherever possible. To minimize the need for new towers and monopoles, the County prefers that new performance standards to mitigate visual impacts. permitted by-right on all existing towers, monopoles, and other tall structures subject to Commercial public telecommunication antennas should be structures and other tail
- 'n towers or monopoles be located Where it is not feasible to locate on an existing structure, the County prefers that new
- ρ In planned and zoned industrial and employment areas
- Ġ eighty (80) feet in height already exist, and Within overhead utility transmission line rights of way where structures greater than

Telecommunication Policies

November 6, 1996

- ဂ mitigate adverse impacts on the character and use of the public or public safety site. On public sites or volunteer fire or rescue company properties where such facilities
- 'n performance standards to mitigate visual impacts, in areas that are both planned and zoned telecommunication monopoles up to 199 feet in height should be a by-right use, subject to In order to encourage location in industrial and employment areas, commercial public that the monopole is not located within 750 feet of a residentially zoned property. and MRHI zoning districts but not the employment areas within PDH districts) provided for industrial and employment uses (such as the GB, PDGI, PDSA, PDOP, PDIP, PDRDP
- 4. addition, The County encourages use of other public sites where telecommunication uses agricultural areas (specifically A3, A10, A25, all CR, and RC zoning districts). performance standards to mitigate visual impacts, on fire and/or rescue sites in rural and monopoles should be permitted as a by right use up to 199 feet in height, subject to In order to facilitate use of volunteer fire and/or rescue company sites, telecommunication mitigate impacts on adjacent residential or other sensitive uses. amendments should also consider adoption of visual impact performance standards to should be permissible as an accessory use by special exception. Any Zoning Ordinance
- 'n commercial public telecommunication tower or monopole will demonstrate to the County Except for areas where towers or monopoles are permitted by right, an applicant for a new 50 feet in height within a one mile radius of any proposed site in the Eastern Loudoun feasibility of using existing or approved towers, monopoles, or other structures greater than that location on an existing tall structure is not feasible. An applicant will evaluate the physical, and economic constraints may be considered in determining unfeasibility. Urban Growth Area and within a two-mile radius elsewhere in the County. Technological, Collocation may be determined to be unfeasible in the following situations:
- þ such towers or monopoles cannot be reinforced to accommodate towers or monopoles, considering existing and planned use of those towers, and Planned equipment would exceed the structural capacity of existing and approved equivalent equipment at a reasonable cost; planned or
- Ġ, Planned equipment will cause interference with other existing or planned equipment reasonable cost; for that tower or monopole, and that the interference cannot be prevented at a
- ဂ္ equipment can be placed so as to provide adequate service; or Existing or approved towers or monopoles do not have space on which planned
- P Existing or approved towers or monopoles will not provide adequate signal coverage.

9 there are existing transmission support structures greater than eighty (80) feet in height. to performance standards, within overhead utility transmission line rights of way where Ordinance should be amended to allow monopoles up to 199 feet in height by-right, subject transmission line rights of way where there are existing tall structures. County encourages new towers and monopoles to locate in overhead utility The Zoning

Urban Location Policies

- as MRHI and PDGI) subject to performance standards to mitigate visual impacts. existing buildings in areas which are both planned and zoned for heavy industrial uses (such The County should revise the Zoning Ordinance to allow towers up to 40 feet in height on
- \dot{b} VDOT's arterial roads. light poles and other existing tall structures in the right of way of the Dulles Greenway and The County encourages the location of commercial public telecommunication antennas on

Rural Location Policies

structures cannot be used, new monopoles or towers should be sited within the right-of-way for County's Historic and Cultural Conservation Districts. character of the rural and historic areas. As such, monopoles and towers are prohibited within the overhead utility transmission lines where the visual impact of an additional tall structure would be The County recognizes the importance of maintaining the natural scenic beauty and historic locating new antennas on existing towers, monopoles or other tall structures. Exception and subject to design criteria for mitigating visual impacts. Elsewhere, towers and monopoles should be located in rural areas only by Special As in urban areas, the County prefers When existing

- tall structures where possible. The County prefers that commercial public telecommunication antennas locate on existing
- 12 monopoles will be permissible in agricultural-residential areas (such as the A-3, A-10, A-Except within overhead utility transmission line rights of way as specified in Countywide to mitigate visual impacts. 25, and CR zoning districts) only by special exception and subject to performance standards Location Policies four (4) and six (6), commercial public telecommunication towers and
- က designated historic districts. Commercial public telecommunication towers and monopoles are prohibited within County

B. DESIGN STANDARDS

mitigate visual impacts through appropriate setbacks, screening, and design. The policies will help telecommunication facilities. There are two main components of the design strategy. The first is to development of new Zoning Ordinance performance standards. minimize and mitigate impacts through appropriate siting and design and provide guidance for limit the need for new towers and monopoles by providing for collocation. This plan calls for design standards to address visual and land use impacts of commercial public The second is to

Tower and Monopole Design

- Due to their reduced visual impacts, when technologically and physically feasible, monopoles are the preferred design.
- 5 sufficient land area for additional equipment buildings unless doing so would: necessary to accommodate at least three providers on the tower or monopole and provide Tower and monopole sites should be designed and constructed to the minimum height
- 4 Create an unnecessary visual impact on the surrounding area; or
- Ò. No additional need is anticipated for any other potential user in this area; or
- ပ် collocation is not possible. There is some valid economic, technological or physical justification as to why

Countywide Visual Impacts

- <u>:</u> as to blend with the natural and built environment of the surrounding area. The visual impact of commercial public telecommunication facilities should be mitigated so
- ы specifically required by the FAA to be painted or lighted otherwise. Towers and antennas should be neutral in color to blend with the background, unless visual impact are: the setting, color, lighting, topography, materials and architecture. The specific communication facility design issues that should be examined in looking at
- ယ appropriate color, texture of materials, topography, scale of buildings, landscaping and these structures should blend in with the surrounding environment through the use of To mitigate the visual and noise impacts of new equipment buildings and accessory uses, visual screening.

Rural and Historic Areas

- conform with the following design considerations: New commercial public telecommunication facilities sited in rural and historic areas should
- þ so that the maximum amount of the structure and associated buildings are screened; Monopole or tower sites should be sited within areas of existing mature vegetation
- Ď Mountains, the Short Hill, and the Blue Ridge; the top of the ridge lines to protect views of the Catoctin, Bull Run, and Hogback Monopoles or tower sites shall not be located along ridge lines but down slope from
- ဂ encourages camouflaging the facility to mitigate visual impacts; conditions will not contribute to screening shall demonstrate that there is no existing Monopoles or towers proposed where mature vegetative buffering or topographical mature vegetated area nearby that could be used instead. In all cases, the County
- ٩ than relying on offsite conditions for mitigation. rather than close to a property line unless a lesser visual impact would occur from Monopoles or towers should generally be sited toward the interior of a property locating it elsewhere. Visual impacts should be mitigated by measures onsite rather
- 'n location for a new tower or monopole is close to existing tall structures. When there is not a feasible location with existing mature vegetation then the preferred
- ယ which the facility could be designed to mitigate the visual impact on the historic structure or provide visual imagery from several different perspectives to help determine the extent to impact on views from or toward the structure will be mitigated. The applicant should or site that is listed on the National Register of Historic Places should show how the visual Commercial public telecommunication towers or monopoles on the property of a structure
- 4. designated Historic District or State Scenic Byway should provide both a visual impact analysis and justification why the tower or monopole could not be sited elsewhere. Applicants proposing a telecommunication tower or monopole within one mile of a County

Publicly Owned or Controlled Facilities and Volunteer Fire or Rescue Companies

existing or planned function of the public facility or volunteer fire or rescue company demonstrate that there will not be any physical or technological interference with the Applicants ģ commercial public telecommunication towers or monopoles

5 company sites where the visual impact of the support building is otherwise mitigated or is Required landscaping may be less stringent for public sites or volunteer fire or rescue consistent with the surrounding area.

By-Right Uses

- offsite conditions for visual mitigation. planned residential areas and should mitigate visual impacts onsite rather than relying on locate toward the interior of a lot rather than along the common boundary with existing or Commercial public telecommunication monopoles in employment or industrial areas should
- 2 should be separated from residentially zoned property by a minimum of 750 feet. existing overhead utility transmission line rights of way, the 750 foot separation does not Within employment or industrial areas, commercial public telecommunication monopoles
- ယ the surrounding area. where the visual impact of the support buildings is otherwise mitigated or consistent with In some locations, such as in industrial areas, required landscaping may be less stringent

Arterial Road Corridors

corridor setback areas if the tower can be sited within existing mature vegetation or the less than a nearby location that adheres to the setback. topographical conditions are such that the visual impact of locating within the setback is The County may consider allowing towers or monopoles in major and minor arterial road

C. SAFETY AND HEALTH POLICIES

authorities. The Plan calls for a commercial public telecommunications provider to demonstrate to between the commercial public telecommunication providers, the County, and the conflict between new towers or monopoles and existing airports. The Metropolitan Washington the County that they have contacted the appropriate airport authorities prior to submission of a land Airports Authority (MWAA) and the Town of Leesburg have expressed concern with coordination This plan addresses two main issues related to safety and health. development application so that any potential airport issues can be addressed. The first is the potential for

commercial public telecommunication use. The second issue relates to the appropriate abandonment of a site no longer maintained for The County has included a policy to require that a site

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existing site conditions. no longer used for commercial public telecommunications be returned as nearly as possible to pre-

Policies

- the Town of Leesburg) and that the FAA has determined that the proposed facility is neither notified the appropriate airport authority (Metropolitan Washington Airports Authority or either Dulles or Leesburg Airports, the applicant will provide verification that he/she has telecommunications tower or monopole is higher than 200 feet or within (5) five miles of they have complied with applicable regulations of the FCC and the FAA. If a proposed a hazard nor an obstruction to aviation. Applicants for any commercial public telecommunications facility shall demonstrate that
- 'n original condition. days of cessation of commercial public telecommunication use or the expiration of the commercial public telecommunication site, including towers and monopoles, within 90 An applicant or its successors shall remove all unused structures and facilities from a lease, whichever occurs first, and the site should be restored as closely as possible to its

D. IMPLEMENTATION POLICIES

implement these policies. telecommunication facilities as well as outline further actions the County intends to take to The implementation policies specify strategies for the County to execute this telecommunications policies give guidance to applicants proposing new commercial

- telecommunication facilities should be revised to be in conformance with these policies comply with this plan. The Zoning Ordinance performance standards for commercial public The County should initiate a Zoning Ordinance amendment to develop regulations that
- 3 information purposes. public facility sites, and areas of by-right zoning for telecommunication monopoles for The County should maintain maps of existing and proposed telecommunication facilities,
- ယ adopt the County's commercial public telecommunication policies for their Urban Growth The Joint Annexation Committees for Purcellville and Round Hill should be encouraged to
- Require all applications for future monopoles and towers to:

- ħ all options from the hierarchy of County location preferences and justify the option Demonstrate that the location proposed has resulted from the systematic review of selected.
- Ġ roads. the facility could be designed to mitigate the visual impact on area residences and imagery from several different perspectives to help determine the extent to which monopole in relation to its surroundings. The applicant should provide such visual photo-image or other similar visual simulation to show the proposed tower or Demonstrate compliance with all design criteria. The applicant should provide a
- ဂ acceptable. Address the terms and conditions under which collocation by other users would be
- 'n vicinity of the proposed site at least three weeks prior to the Planning Commission public Applicants for proposed new towers should notify in writing and meet with citizens in the hearing.
- ġ. Loudoun County Fire and Rescue communication purposes. Applicants for proposed new towers are encouraged to provide space on the tower for

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